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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,735	03/13/2007	Michael Powers	RUS0143	5019
29296 7590 04/16/2008 JULIA CHURCH DIERKER DIERKER & ASSOCIATES, P.C. 3331 W. BIG BEAVER RD. SUITE 109 TROY, MI 48084-2813				
EXAMINER ROSATI, BRANDON MICHAEL				
ART UNIT		PAPER NUMBER		
3744				
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04/16/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/582,735

**Applicant(s)**

POWERS ET AL.

**Examiner**

BRANDON M. ROSATI

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 9, 11, 13-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Applicant is informed that two of the claims are numbered as 6. The examiner has renumber the second claim 6 as claim 7 and subsequent claims 7-15 have been renumbered as claim 8-16 respectively in accordance with rule 37 CFR 1.126.

#### ***Claim Objections***

2. Renumbered Claims 9, 11, and 13-16 are objected to because of the following informalities:
3. Regarding claim 13, the phrase “vis a vis” should be replaced by a more common phrase. The Examiner suggests using - - in relation to - - . Appropriate correction is required.

Regarding renumbered claims 9 and 15, term "extreme" renders the claim indefinite. It is not clear what qualifies as "extreme" pressure and for the purposes of examination the examiner will interpret this term to mean any pressure, which is present in the heat exchanger. The examiner recommends amending the claims so that a minimum pressure is claimed which is the lower limit for a pressure, which qualifies as an extreme pressure.

Regarding renumbered claim 11, the phrase “less than or about” in line 26, renders the claim indefinite.

Regarding renumbered claim 14, the term “basically” renders the claim indefinite. It is unclear as to what constitutes something as being "basically flat."

Regarding renumbered claim 16, the term “appropriate” in lines 17 and 18, renders the claim indefinite. Clarification as to what an “appropriate position” would be is needed.

### ***Double Patenting***

4. Claims 1-9 and 16 of this application conflict with claims 1-9 of Application No. 11/103,163. It is noted that Application No. 11/103,163 contains two claims which are numbered as "6." 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

5. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

6. Claims 1-9 and 16 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-9 of prior U.S. Pub. No. 2005/0133208 A1. This is a double patenting rejection.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

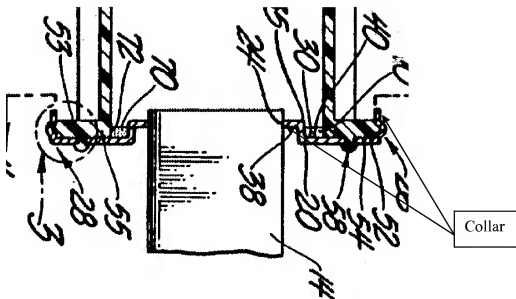
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claims 1-3 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Puntambekar et al. (U.S. Patent No. 5,195,581).

Regarding claim 1, Puntambekar et al. disclose in Figures 1-3, a heat exchanger body, a heat exchanger tank (i.e. tank unit) (12), a header (20), a tube (14) extending from the heat exchanger body and passing through the header, a tank foot at the end of the tank (i.e. parallel arms) (50 and 51), a tank to header sealing gasket (i.e. adhesive material) (70), a collar (as seen in the Figure below), wherein the tank to header sealing gasket is essentially coplanar with the header and wherein the collar is situated at an area of passage of the tube through the header (Column 2, lines 23-55 and Column 3, lines 11-21). It is noted that although Puntambekar et al. does not specifically disclose the term a gasket, the adhesive as disclosed performs the same function as a gasket. It is further noted that the Examiner is interpreting the collar to be the area as indicated in the Figure below. It is also noted that the phrases “for a heat exchanger” and “for use in automotive applications” are statements of intended use at the header arrangement as shown can perform the functions.



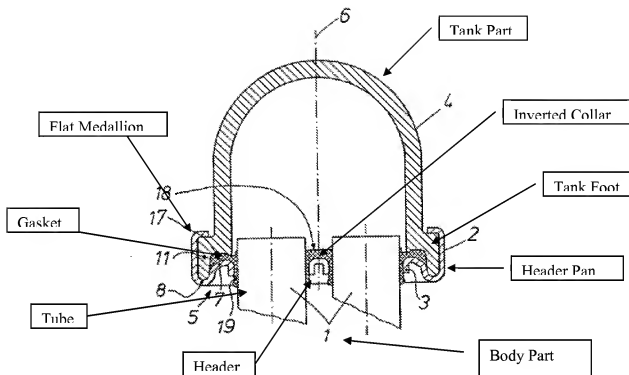
Regarding claim 2, Puntambekar et al. disclose a collar as shown in the Figure above, wherein the collar acts as a structural feature or rib.

Regarding claim 3, Puntambekar et al. disclose a tank to header sealing gasket (i.e. adhesive material) (70), which is essentially flat (Figure 3).

Regarding claim 9, Puntambekar et al. disclose a heat exchanger. It is noted that the phrase "used in high or extreme pressure internal operating environments" is a statement of intended use and the heat exchanger as shown in Puntambekar et al. is capable of being utilized as one of the forms above.

9. Claims 10 is rejected under 35 U.S.C. 102(b) as being anticipated by German Patent (DE 295 04 526 U1) (herein referred to as '526).

Regarding claim 10, '526 discloses a heat exchanger body, a heat exchanger tank part, a header, a tube extending from the heat exchanger body part, a header pan, a tank foot, and a gasket, wherein the pan is a flat pan comprising at least one collar (See Figure below).



### *Claim Rejections - 35 USC § 103*

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Puntambekar et al. (U.S. Patent No. 5,195,581) in view of Abu-Isa et al. (U.S. Patent No. 4,559,688).

Regarding claim 4, Puntambekar et al. disclose all the claimed limitations except curing the gasket in place. However, Abu-Isa et al. discloses curing a gasket (column 2, 12-19). Hence, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of Letrange with the cured gasket of Abu-Isa et al. because using the cured gasket would ensure that the gasket would shift less under stress, which could result in failure of the gasket as well as allow for a better and tighter seal.

Regarding claim 5, Puntambekar et al. disclose a collar wherein the collar height is proportional to the header thickness, tube width and pitch (Figure 2).

Regarding claim 6, Puntambekar et al. disclose a collar with a height and a header with a thickness, but the exact dimensions of the height and thickness are not given. However, Figure 2 appears to show a collar height that is at least one half times the header thickness. Furthermore, it

would be an obvious mechanical expedient to one of ordinary skill in the art to make the collar height bigger than the header thickness in order to increase the support of the collar in order to reduce the risk of failure.

Regarding claim 7, Puntambekar et al. disclose in Figure 2, a gasket and tank foot retained with the collar (See also the Figure above).

Regarding claim 8, Puntambekar et al. disclose a collar that is upturned (Figure 2).

14. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Puntambekar et al. (U.S. Patent No. 5,195,581) in view of Letrange et al. (U.S. Patent No. 5,758,721) in further view of Grant (U.S. Patent No. 4,972,615).

Regarding claim 16, Puntambekar et al. disclose a heat exchanger with a flat header, providing as gasket between a tank foot and a gasket flange, providing a crimp to retain the tank foot between the gasket flange and an outer flange, and crimping the tab at an appropriate position (Figure 3). It is noted that Figure 3 shows what the Examiner thinks is an appropriate position. Puntambekar et al. does not disclose stamping a metal sheet using a stamping tool, maintaining flatness of a plane of a header during the stamping step, scoring the tab at an appropriate position to allow it to retain the tank foot. However, Letrange discloses stamping the header plate. It is obvious that during the stamping step the plane of the header must remain flat (Column 5, lines 7-19). Grant teaches the concept of scoring a tab and then crimping it into position (Column 7, lines 11-17). Hence it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the teaching of Puntambekar et al. with the stamping of Letrange et al. because stamping header plates is a well known, cost effective way to make header plates in the art. Furthermore, it would be obvious modify the teaching of

Puntambekar et al. with the concept of scoring and crimping as taught by Grant because scoring first and then crimping ensures an even bend during the crimping step and thus reduce any extra stresses on the bent portion which could result in failure.

15. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent (DE 295 04 526 U1) (herein referred to as '526).

Regarding claim 11, '526 disclose a tube having a length that appears to be of less than or about twice the thickness of the header plus tank foot width of the header. Although the exact dimensions are not given, it is obvious from Figure 1 that tube has a length of less than or about twice the thickness of the header plus tank foot width of the header. Furthermore, it is an obvious mechanical expedient to one of ordinary skill in the art to utilize a tube having a length of less than or about twice the thickness of the header plus tank foot width of the header because doing so will ensure a properly functioning tube as well as minimizes the amount of material needed to be used to maximize cost.

Regarding claim 12, '526 disclose a header pan further comprising a flat medallion (See Figure above).

Regarding claim 13, '526 disclose at least one collar that is inverted in relation to the line of extension of the tube (see Figure above).

Regarding claim 14, '526 disclose in Figure 1, a gasket which is basically flat in shape (see Figure above).

Regarding claim 15, '526 disclose a heat exchanger in Figure 1. It is noted that the phrase "used in high or extreme pressure internal operating environments" is a statement of intended use

and the heat exchanger as shown in Puntambekar et al. is capable of being utilized as one of the forms above.

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Calleson (U.S. Patent No. 5,107,926) discusses a header plate made by stamping. Lambert et al. (U.S. Patent No. 5,894,649) discusses a heat exchanger and method of making. Kroetsch et al. (U.S. Patent No. 5,899,267) discusses a radiator tank with a foot. Geiger (U.S. Patent No. 6,196,305 B1) discusses a radiator assembly. Shields et al. (U.S. Patent No. 7,121,329 B2) discusses a header tank assembly. Kroetsch (U.S. Patent No. 5,201,368) discusses a gasket for a tank and header assembly. Kado et al. (U.S. Patent No. 6,035,931) discusses a heat exchanger with bent portions. Letrange et al. (U.S. Patent No. 5,873,409) discusses a header plate. Bretl et al. (U.S. Patent No. 5,228,512) discusses a header plate. Aurand (U.S. Patent No. 4,722,387) discusses a header exchanger. Halm et al. (U.S. Patent No. 5,947,196) discusses scored tabs. Higgins (U.S. Patent No. 6,179,049 B1) discusses a collar. Lesage (U.S. Patent No. 7,234,511 B1) discusses a flat gasket.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDON M. ROSATI whose telephone number is (571)270-3536. The examiner can normally be reached on Monday-Friday 8:00am- 4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler or Frantz Jules can be reached on (571) 272-4834 or (571) 272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BMR

3/26/2008

/Frantz F. Jules/

Supervisory Patent Examiner, Art Unit 3744